

REMARKS/ARGUMENTS

Introduction:

Claims 1-3, 5-8, 11, 12, and 15-20 are amended, and claims 21-31 are newly added. Claims 1-31 are now pending in the application. In addition, the title and paragraphs [0005], [0006], [0029], [0032], [0035], [0036], [0041], and [0042] are amended. Applicants respectfully request reexamination and reconsideration of the application.

Initially, Applicants note that the amendments to the preambles of claims 18-20 were not made for reasons of patentability.

Allowable Subject Matter:

Applicants acknowledge with appreciation the Examiner's indication that claims 2 and 19 contain allowable subject matter and would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants have rewritten claim 19 in independent form, which should now be in condition for allowance. In addition, Applicants have amended claim 2 to depend from claim 3, which, as discuss below, should also be in condition for allowance.

Objections to the Drawings:

The drawings were objected to because the specification does not mention reference number 202b in Figures 2A-2C, reference number 1212 in Figure 12, and reference number 1306 in Figures 13A-13C. The drawings were also objected to because the reference character 636 is used to refer to both the terminals and the tips in paragraph [0029] of the specification. In response, Applicants have amended paragraph [0005] to include reference number 202b, paragraph [0041] to include reference number 1212, paragraph [0042] to include reference number 1306, and paragraph [0029] to refer to "terminals 620." Applicants submit that these amendments to the specification overcome the objections to the drawings.

These amendments to paragraphs [0005], [0041], [0042], and [0029] do not introduce new matter for the following reasons:

As originally filed, paragraph [0005] referred to "one or more dies" of wafer 124, and identified element 202a as one of the "one or more dies" of wafer 124. The amendment to paragraph [0005] identifies element 202b, as another one of the "one or more dies" of wafer 124.

A person of skill in the field would readily recognize element 202b, as depicted in Figures 2A-2C, as a die, like die 202a, of wafer 124. Therefore, the amendment to paragraph [0005] does not add new matter to the specification.

Paragraph [0041] is amended to add "element 1212" and describe element 1212 as "holding the probe card 406." Figure 12 shows element 1212 holding probe card 406. Therefore, the amendment to paragraph [0041] does not add new matter to the specification.

Paragraph [0042] is amended to add "element" 1306" and state that probes 1308 "are attached to element 1306." Figures 13A-13C show probes 1308 attached to element 1306. Therefore, the amendment to paragraph [0042] does not add new matter to the specification.

Paragraph [0029] is amended to change one instance of "terminals 636" to "terminals 620." As originally filed, paragraph [0029] refers twice to "terminals 620," and the element labeled 620 in Figures 5A-5C would be readily recognized by a person of skill in the field as a terminal. Therefore, the amendment to paragraph [0029] does not add new matter to the specification.

Objections to the Disclosure:

The disclosure was objected to due to typographical errors in paragraphs [0006], [0032], [0035], and [0036]. Those paragraphs have been amended to address the Examiner's concerns, which should overcome the objections to the disclosure.

Objections to the Claims:

Claims 2, 6, and 18-20 were objected to due to various informalities. With one exception, the amendments to the claims address the informalities noted in the Office Action. The one exception is as follows: the word "probe" in the phrase "each said probe" in claims 6 and 20 is properly singular—not plural. Accordingly, that phrase was not amended. Applicants therefore request that the objection to claims 6 and 20 be withdrawn. Otherwise, however, the amendments to claims 2, 6, and 18-20 should overcome the other objections to claims 2, 6, and 18-20.

Rejection of Claims as Anticipated by Montoya:

Claims 1, 4, 7-10, 13, 14, and 18 were rejected under 35 USC § 102(b) as anticipated by US Patent No. 5,773,987 to Montoya ("Montoya"). Applicants respectfully traverse this rejection.

Independent claim 1 recites a "method of probing an electronic device" in which probes and/or the electronic device are moved from "a first relative position" in which "said probes are spaced apart from said electronic device" to "a second relative position" in which "ones of said probes physically contact ones of said terminals." Moreover, the movement from the first relative position to the second relative position includes "a directional component that is parallel to said surface [that comprises a plurality of terminals] of said electronic device." In other words, in the method of claim 1, the movement of the electronic device and/or the probes *that brings the probes and electronic device into contact with each other* includes "a directional component that is parallel to" the surface of the electronic device that includes the terminals.

Montoya does not disclose such a movement. Rather, the only movement described by Montoya for bringing probe 122 into contact with die pad 63 is purely vertical with respect to the surface of die substrate 60 that comprises the die pad 63. Step 46 of Figure 5 moves die substrate 60, and thus die pad 63, into contact with probe 122, and step 46 is described as follows: "a third step 46 is to move the chuck (and therefore the wafer) toward the probe card in *a Z axis direction* until the probes make physical contact with the bond pads of the die. Movement of the chuck toward the probe card is achieved by controlling stage 125 with *Z axis* motor 132." (Montoya col. 4, lines 60-65.) As shown in Figure 6, the Z axis is perpendicular to the surface of die substrate 60 that comprises bond pad 63 and has no component that is parallel to that surface of die substrate 60. Indeed, step 50 in Figure 5 of Montoya, which includes movement in "x and y directions," does not occur until *after* the probe 122 and bond pad 63 have been brought into contact with each other. Thus, Montoya does not teach or suggest that *the movement* of the die substrate 60 and/or the probe 122 *that brings the probe 122 and die substrate 60 into contact* with each other includes "a directional component that is parallel to said surface [that comprises a plurality of terminals] of said electronic device," as would be required to meet the features of claim 1. Therefore, Montoya neither anticipates nor renders obvious claim 1.

Claims 4, 7-10, 13, and 14 as well as new claims 26-30 depend from claim 1 and are therefore also patentable over Montoya.

Like claim 1, independent claim 18 includes a parallel directional component to the movement that brings probes and an electronic device into contact. Montoya thus also fails to teach or suggest claim 18.

New claims 21-25 depend from claim 18 and are therefore also patentable over Montoya.

Rejection of Claims as Anticipated by Cooper:

Claims 1, 3-18, and 20 were rejected under 35 USC § 102(e) as anticipated by US Patent Application Publication No. 2004/0130312 to Cooper et al. ("Cooper"). Applicants respectfully traverse this rejection on the grounds that the inventive entity of Cooper and the present application are the same.

As stated in the MPEP, "[i]n order to apply a reference under 35 U.S.C. 102(e), the inventive entity of the application must be different than that of the reference. Note that, where there are joint inventors, only one inventor need be different for the inventive entities to be different." (MPEP §706.02(a) II.B.) The requirement that at least one inventor be different arises from the express language of the patent statute, which defines prior art under 35 USC §102(e) as "the invention was described in – (1) an application for patent, published under section 122(b) *by another* filed in the United States before the invention by the applicant for patent" (35 USC 102(e) (emphasis added).)

The inventive entities of Cooper and the present application are exactly the same. Each inventor named in Cooper is also named as an inventor of the present application, and each inventor named in the present application is also named as an inventor in Cooper. Thus, there is not even one inventor that is different. Cooper is thus not prior art to the present application, and the rejection in view of Cooper should accordingly be withdrawn.

Applicants note that claims 3, 5, 6, 11, 12, 15-17, and 20 were rejected only in view of Cooper. Those claims are therefore presumably allowable over the prior art of record.

Claims 3, 6, and 20 have been rewritten in independent form and therefore should be allowable over the prior art of record.

In addition, new independent claim 31 specifies that the electronic device comprises one of the specific types of electronic devices identified in claims 11, 12, 15, or 16. Because none of

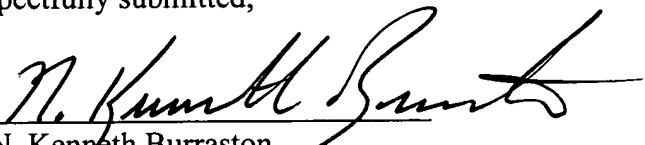
claims 11, 12, 15, or 16 was rejected in view of prior art other than Copper, new claim 31 should be in condition for allowance.

Conclusion:

In view of the foregoing, Applicants submit that all of the claims are allowable and the application is in condition for allowance. If the Examiner believes that a discussion with Applicants' attorney would be helpful, the Examiner is invited to contact the undersigned at (801) 323-5934.

Respectfully submitted,

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By 
N. Kenneth Burraston
Reg. No. 39,923

Kirton & McConkie
1800 Eagle Gate Tower
60 East South Temple
P.O. Box 45120
Salt Lake City, Utah 84111-1004
Telephone: (801) 323-5934
Fax: (801) 321-4893